

Inventor: ERICKSON et al.
 Docket No.: 00270.0079USWO
 Title: HARVEST-INDUCIBLE GENES FROM ALFALFA (MEDICAGO SATIVA) AND
 METHODS OF USE THEREOF
 Attorney Name: Gregory A. Sebald
 Phone No.: 612.336.4728
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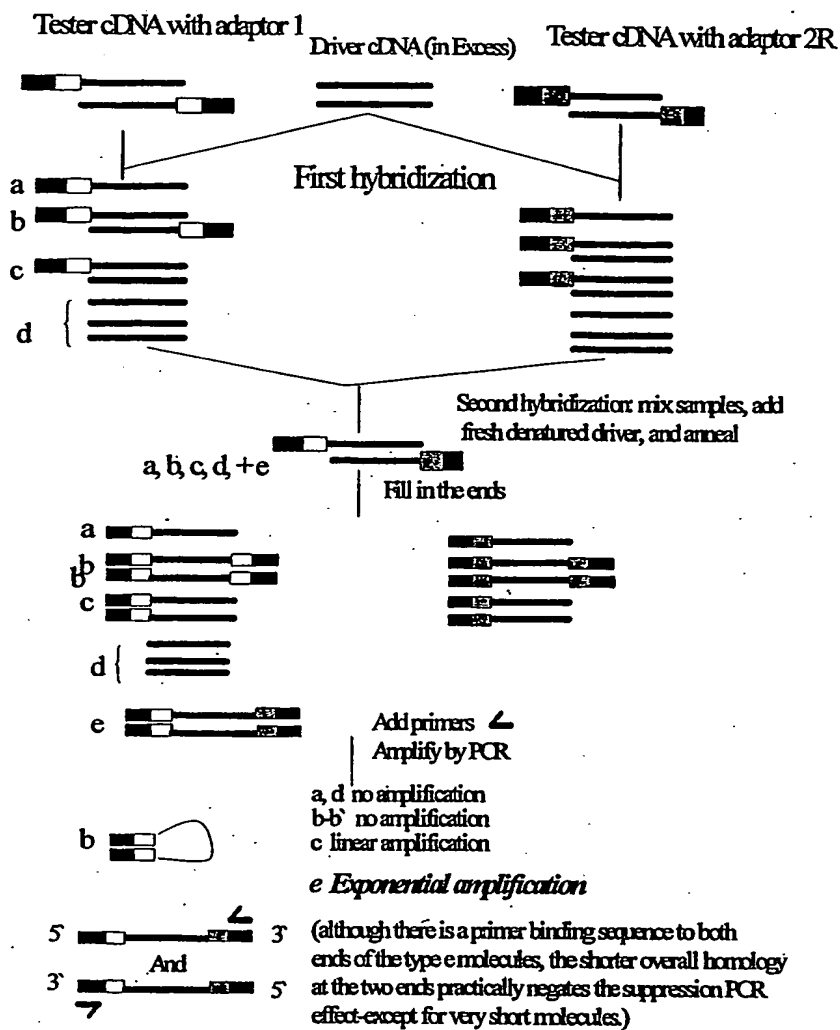


FIG. 1

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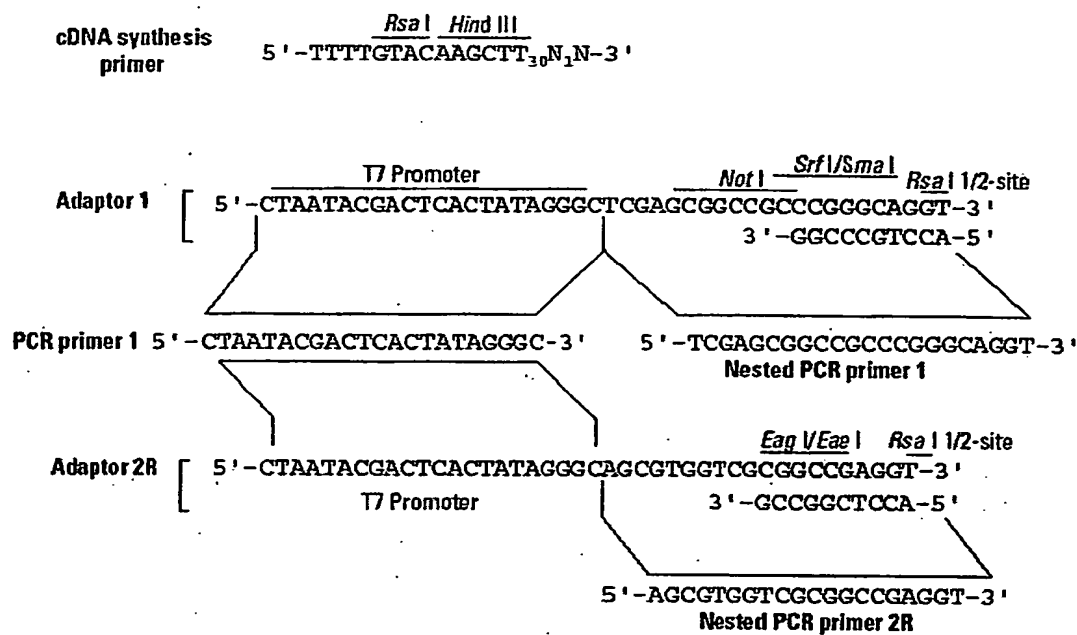


FIG. 2

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PCT/CA2003/000964

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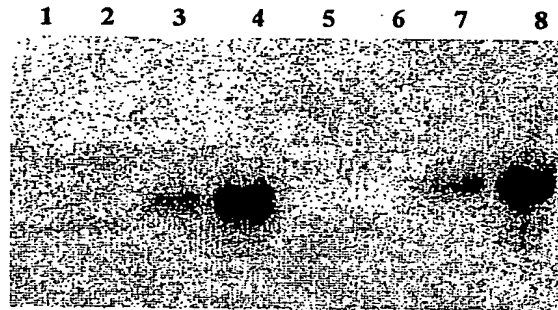


FIG.3

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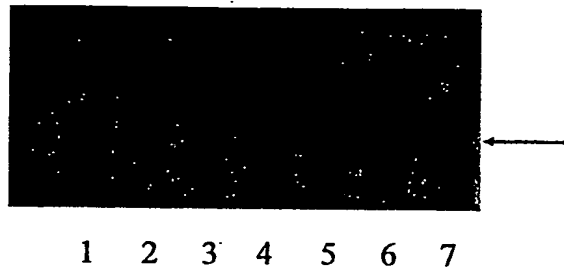


FIG. 4

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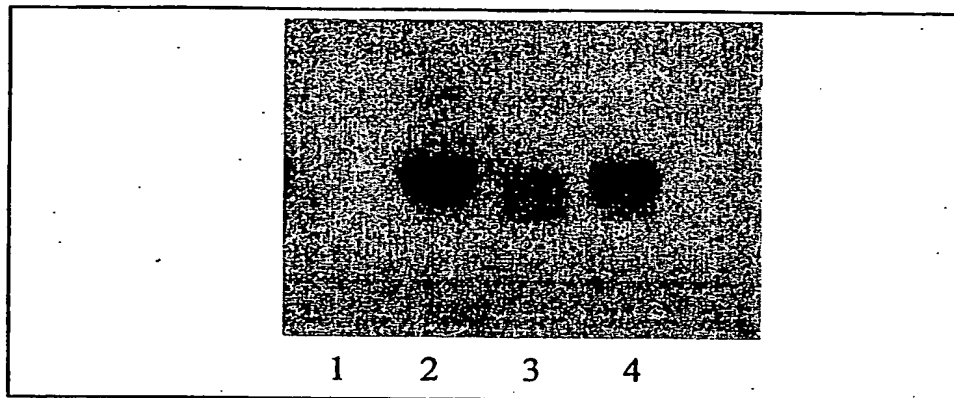


FIG. 5

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1 2 3 4 5 6 7

FIG. 6

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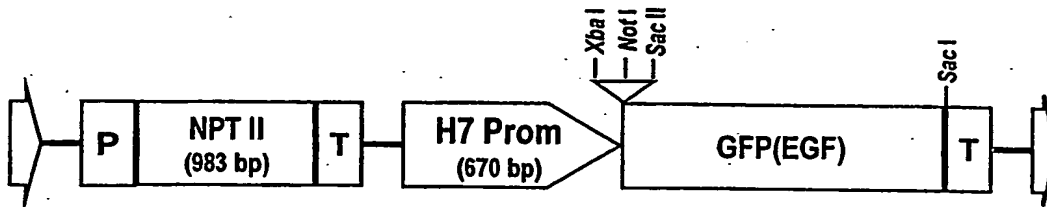


FIG. 7

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ccacccatga caccattgct atatttcaat ttgggaaaat attgctataa agttactgta 120
gtaactttta gaagaagggt ttttttttaa ggatttttag ggaagggttag caacacacat 180
gcacttttaa tatacathtt ttcttataaa gtttttgtat cgagttgaga aatcatatat 240
atactcataa atcatgtgga ttctatataa tttaatagaa cacataaatt ttaaccgaga 300
aataaagtgt tgcaaataa tgttaaaaga gtacgttggt aacattatht taatttcttt 360
tattcaatcc acactttgag tcatggactg ctatactaht tcattttggt ttctcgcaacc 420
taattagaga ttgtccagat acaaagagga gtaacctaat aaataaatat taaaatattc 480
accaacggcc tcagtaagct acttgagcta aacaatgaga tttccaaata aggtagggtcc 540

ttcccaagtt ctataaatag catccctcac catgtcataa accgcatcac aagtatatata 600
CTGTATTCAT ACTATACACT TATCCTTTCA TTTACTTCTT GCATATTGAT CCTTGTATC 660
TTGATATATA TATCATGGGTGTTTTTACTTTCAATGATGAACATGTCTCAACCGTGGCTC 720
      M G V F T F N D E H V S T V A
CAGCTAAACTCTACAAGGCTCTTGCAAAAGATGCTGATGAAATCGTCCCAAAGGTGATTT 780
P A K L Y K A L A K D A D E I V P K V I
CTGCTGCCCCAAGTGTTGAAATTGTTGAAGGAAATGGAGGACCCGGAACATTAAAGAAGC 840
S A A Q S V E I V E G N G G P G T I K K
TATCCATTGTTGAAGATGGCAAAACCAACTTTGTGCTACACAAATTAGATTCAGTGGATG 900
L S I V E D G K T N F V L H K L D S V D
AGGCAAACTTTGGATATAACTACAGCTTAGTGGGAGGAACAGGGTTGGATGAAAGTTTAG 960
E A N F G Y N Y S L V G G T G L D E S L
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E K V E F E T K I V A G S D G G S I V K
TTTCAGTGAAATACCATACCAAAGGTGATGCAACTCTATCTGAAGCAGTACGTGAGGAGA 1080
I S V K Y H T K G D A T L S E A V R E E
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T K A K G T G L I K A I E G Y V L A N P
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N Y *
TAATAATTAA AGTTTATGAT GCGGTTGAAG TGTGTTGAGT ATACATCAAG GTCTTTGGCT 1260
CGTACATGTG TGTGGCTTT GTTGGATGTT GTGAGGTTTG AGTGCTATTT TGGGTGTTTA 1320
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ATAATGCAAA AGAATTTTAT CGCGAAAAAA AAAAAAAAAA AAAA 1424

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FIG. 8

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cagaaccccg anaggctggt gctagtatgg cttcgttgta atacgactca ctatagggcg 60
cgcggtggtcg acggcccggg ctggtatcag cgagtaacga ttcatcatat ctcacactag 120
ggatgaatga tttattattg agtttatgaa tttgaactat tacttctaata ttctaaatga 180
agacatttaa gtaaaagatt aaaatattct agtttcaaat attttggatt ttagaattta 240
aatttaatct ttaaaaaaaaa attaaattta aagaagataa aaagggagaa aataaataga 300
tgaatataat ttgtaaacat gaagacctta tctccagtaa aaaaacatat ggaccttatc 360
tttttgaggt aggaaggatc tacgcgggga acctcttcct gactgtgaac cccgtatgca 420
gaggcagaga cagagagtAT GGCCTCCACA CTCAGTCTTG TCAAGCTTCC CATTCTTTCA 480
AGCATCAAGA CACGCCAATC AACCTCAAAA CATGTTGTTC CACTTCCATC CAAATTCAAT 540
ATTGTCCCTC CCACCCCACT AAAGTTTTCA TTAGATCATC AAATTAATAT CAAACAAACT 600
TCTCTTCTAT CCCTCACAGC AATCACATTT CCATTCTTAT TGGATACCAA ggcaagcaag 660
caagcaagca tcctattcta ttctattctt tcatccatat ctttactctt ttgttttcta 720
accaatccat gatatgaatg ttgttgaaac aggatgcact tgctgttggt ggAGAGTTTG 780
GGATATTTGA AGGAAGAACA TTTGCTCTCA TTCACCCCAT TGTGTTGGGT GGTGTTGTTCT 840
TCTATACTCT ATATGCTGGC TATTTGGGGT GGCAATGGCG CCGAGTTAGG ACTATTCAAA 900
ATGATATTAA TGAGCTCAAG AAACAACCTCA AACCTGCACC GGTCGCCCCCT GATGGTAAAG 960
CACTTGAAAC TTCACCGCCA TCACCTGTTG AACTTCAAAT CCAGAAACTT ACTGAGGAGA 1020
GGAAAGAGCT TATCAAAGGT TCATACAGGG ATAAACACTT TAATGCTGGA TCCATACTTC 1080
TAGGATTTGG TGTCTTTGAG GCTGTTGGTG TGAGGACTCA ACACATGGTT AAGGACAGGA 1140
AAGCTATTTT CAGGTCCACA TTTATTTGCA GGAGCAGGCA TTACCGTCTT ATGGGCACTG 1200
GCAGCAGCTC TAGTACCACC GATGCAGAAA GGCAGTGAAA cagccagaaa tcttcacatt 1260
gctctgaata cattgaatgt tcttctcttt gtgtggcaga ttcccactgg acttgatatt 1320
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ctattctgca ttttcaaaaa aaaaaaaaaa aaaaaaaaaa aa 1482

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FIG. 9

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1 aaatacaaag gtgaccttat tttgcaaata atccatgcat ggaaatgcat catccttttg
 61 aaaatgggtt tatctgaatt cttaa gttacgtgaa aattt aatacatttc attttagata
 ABRE cis-acting element
 121 aatttattat taaaattcac acttagatgg cctaaaaatt aacacttatt tttacaatt
 181 caaataaaat atacgacgaa atgagtgtaa tttagtgtgt taagcatcgt caaagcttgg
 241 agagaaagat catagtttga tctttgaaaa ctatactatt gaaaagggtg aagatatcta
 301 acctccaaca aaatttattt gatagtcgat tcaaattatc aaaatttgga aaatattttg
 361 taaattgtta agttgggaaa aatatgttaa ttttcaaatt accatttgca catttttcta
 421 atctcaaatc acatttaagg gatgttgact actttcgttt tgtacaaatc tttacaattt
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 661 tttcataact cattttctat aaatacagaa aatcctcaaa aatgaaaaac ctcggtcaaa
 721 aaataaaaga aaaacatcaa tagtggactg gccacactc attgctttgc tttagtatga
 781 gaaagtagac ctcaccaacc acgaaccgga cgccgaccgg ttcaaccaaa catcacacca
 CAAT-BOX
 841 attttcctaa accataccgg tttttccctc ccttatata ccatcctctc cctctttctc
 TATA-BOX
 901 taaccaagct tcattcaact cttcaacaca tatcagaaaC AGAAAAAAGA AGCAAAACAT
 961 TCCAAGAATT TAACAATGGCAACCAACGAAGATCAAAAGCAAACCTGAATCTGGAAGACAT
 M A T N E D Q K Q T E S G R H
 1021 CAAGAAGTTGGTCACAAGAGTCTTTTACAAAGTGATGCTCTTTACCAGTATATTCTAGAG
 Q E V G H K S L L Q S D A L Y Q Y I L E
 1081 ACCAGTGTCTTCCCAAGAGAACATGAAGCCATGAAAGAGTTGAGAGAGGTCACAGCAAAA
 T S V F P R E H E A M K E L R E V T A K
 1141 CACCCATGGAACATCATGACAACCTCTGCAGATGAAGGACAATTTTTGAGCATGCTCCTT
 H P W N I M T T S A D E G Q F L S M L L
 1201 AAAGTTATCAATGCTAAGAATACCATGGAATTTGGTGTCTACACTGGCTACTCCCTCCTT
 K L I N A K N T M E I G V Y T G Y S L L
 1261 GCCACTGCCCTAGCTATTCTGAAGATGGAAGATTTTGGCTATGGACATTAACAAAGAA
 A T A L A I P E D G K I L A M D I N K E
 1321 AATTACGAATTGGGTCTACCTGTAATTAAGGCTGGTGTGATCACAAAATTGATTTT
 N Y E L G L P V I K K A G V D H K I D F
 1381 AGAGAAGGTCCAGCTCTTCCAGTTCTTGATGAAATGATCAAAGACGAAAAGAATCATGGT
 R E G P A L P V L D E M I K D E K N H G
 1441 AGCTACGATTTTCAATTTTGTGGATGCTGACAAAGACAATTACCTCAACTACCATAAGAGG
 S Y D F I F V D A D K D N Y L N Y H K R
 1501 TTAATTGATCTTGTAAAGTGGGAGGTGTGATCGGGTACGACAACACCTTATGGAATGGA
 L I D L V K V G G V I G Y D N T L W N G
 1561 TCTGTGGTTGCACCCCTGATGCTCCATTGAGGAAGTATGTTAGGTACTATAGAGATTTT
 S V V A P P D A P L R K Y V R Y R D F
 1621 GTTTTGGAGCTTAACAAGGCTTTGGCTGTGGACCCTAGGATTGAAATATGTATGCTTCCT
 V L E L N K A L A V D P R I E I C M L P
 1681 GTTGGTGATGGAATCACTATCTGCCGTAGGATCAAGTAA TTGGTTTGCATGTGCACTATA
 V G D G I T I C R R I K *
 1741 TCATGTAATGCACTGCTCCACATTATTGATCATTATTGTGTGGAAGCTACAGAGCATTTA
 1801 AAAGTCTTCAAGCCTTCTTGTCTTTTGTATTATTTTCTTCAACATATTTGTGGTTGTAATT
 1861 TTCTCTTGTG ATTGATATTG AAAGTTCGAA TAATTGAAAG TTATAT

FIG. 10

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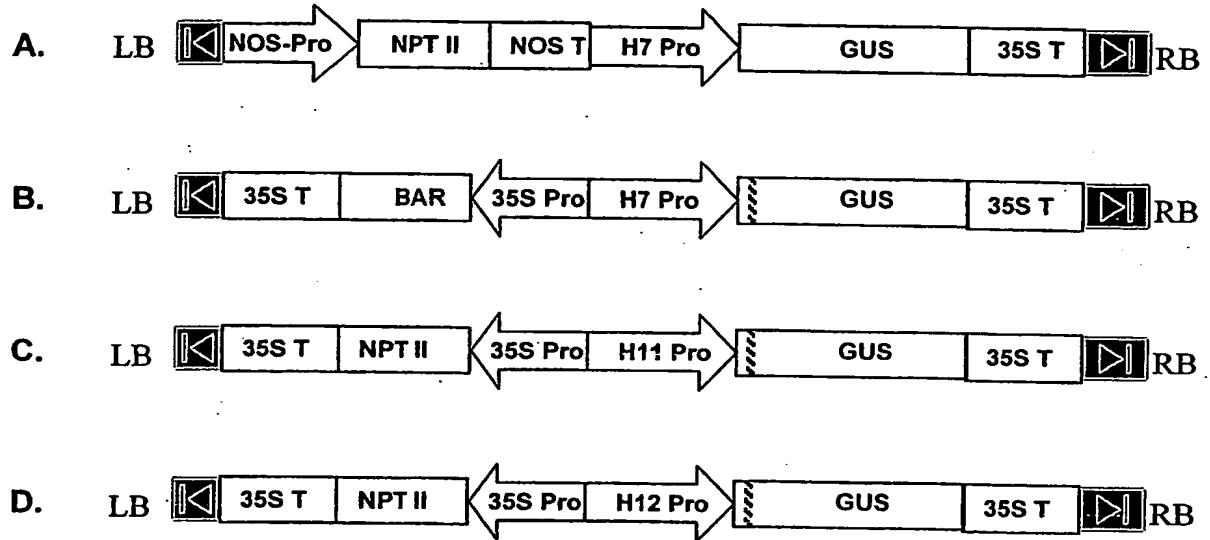


FIG. 11

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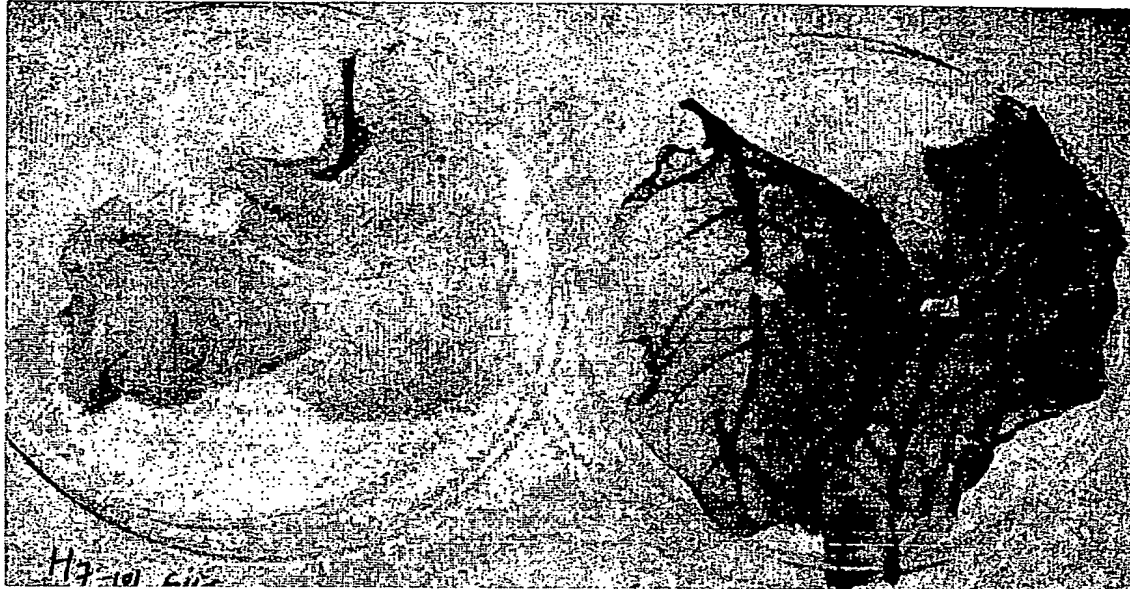


FIG. 12

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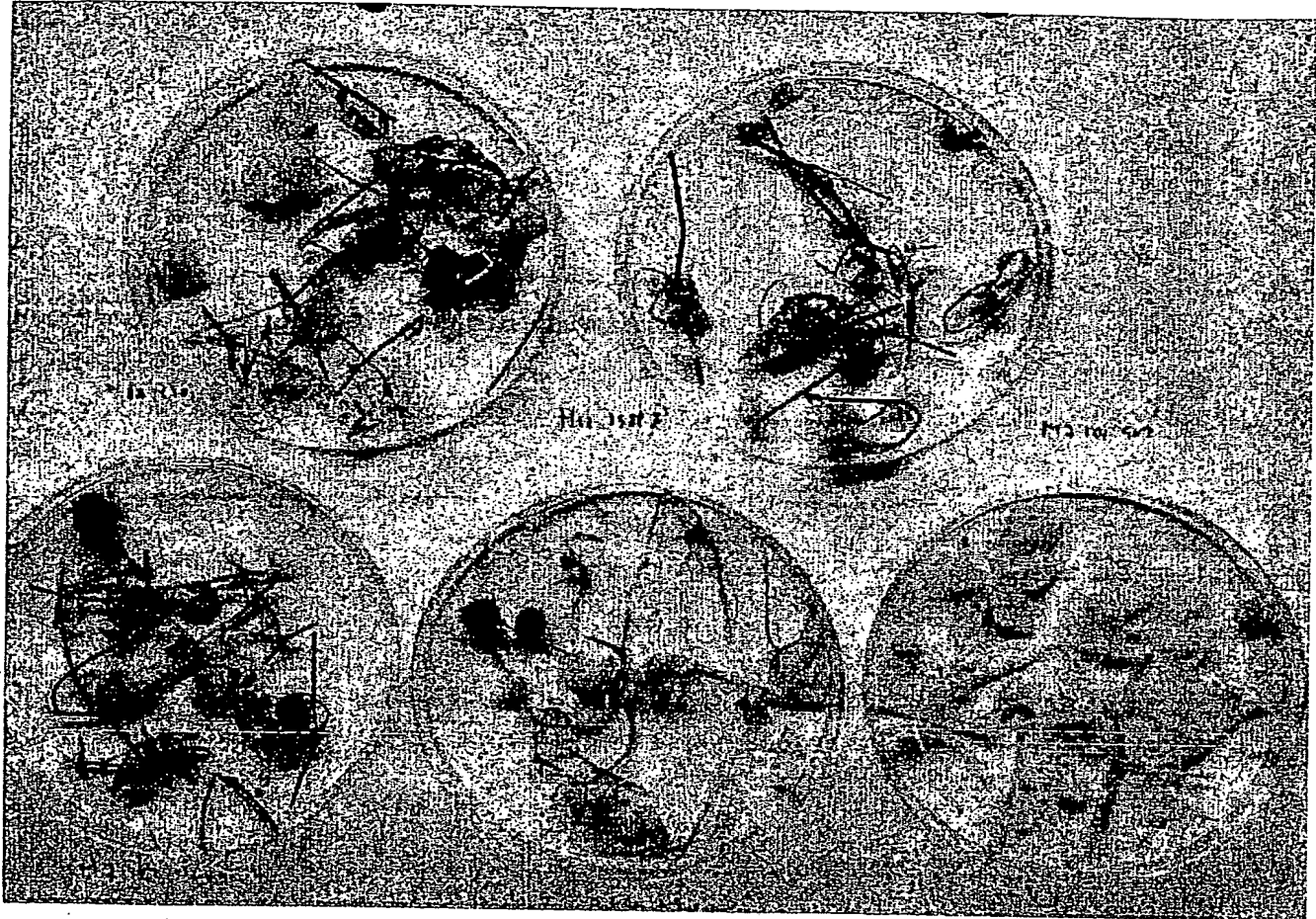


FIG. 13